REVISITING THE PLUG: CAN A BELT AND SUSPENDERS APPROACH TO INGUINAL HERNIA REPAIR CREATE A MORE RESILIENT SOLUTION?

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- Background:
- Early enthusiasm for the use of mesh plugs in open inguinal hernia repair was based on effectiveness of the plug as a tension-free space-occupying entity and as scaffolding for fibrous in-growth to strengthen the repair. Reports of hernia recurrence and chronic inguinal pain secondary to plug migration have greatly dampened interest in the technique. The emergence of robotic transabdominal preperitoneal (TAPP) inguinal hernia repair has created improved access and availability of inguinal anatomy potentially more amenable to mesh plug placement. When used in conjunction with a traditional preperitoneal mesh patch technique, a novel approach utilizing closure of the hernia defect with a modified Bassini tissue repair and incorporation of a mesh plug into the closure may create a redundant repair more resistant to recurrence and without the historically reported complications associated with mesh plug use.
- Methods:
- From March 2012 to October 2018, a total of 514 patients underwent robotic-assisted TAPP inguinal hernia repair by one surgeon at two facilities. Two year follow up was conducted with clinic appointments and phone calls at 4-month intervals. All patients were identified as having a unilateral or bilateral inguinal hernia. All inguinal hernias were repaired with a modified Bassini approach involving closure of the defect using the conjoined tendon and inguinal ligament with a polypropylene mesh plug incorporated into the closure with a 2-0 monofilament barbed suture in addition to a traditional preperitoneal patch technique. A retrospective review was performed on these patients, noting the outcomes and complications related to the procedures.
- Results:
- The average patient age was 53.2 years. Average preoperative body mass index was 30.2 kg/m2. Zero patients (0.0%) had an inguinal hernia recurrence. Five patients (1.0%) had persistent inguinal pain, with one lasting longer than 3 months. No referrals to pain specialists were necessary. Six (1.1%) patients had mild surgical incision infection requiring surveillance. No patients required reoperation or mesh removal (0.0%). There were no significant intraoperative complications.
- Conclusions:
- Robotic TAPP inguinal hernia repair combining traditional preperitoneal mesh patch placement with a novel approach involving a preperitoneal modified Bassini tissue repair with incorporation of a mesh plug into the defect closure results in a robust, redundant repair that is equivalent or superior in durability when compared to known recurrence rates for traditional patch repair. In addition, two-year follow-up reveals no incidence of long-term chronic inguinal pain previously associated with use of mesh plugs in open inguinal hernia repair. Larger prospective studies are necessary to further substantiate these findings, but initial evidence suggests the use of a mesh plug as a component in this combined approach creates an equitable, if not unparalleled repair when compared to traditional mesh patch repair alone.